Massachusetts: Driving Utility Energy Efficiency Efforts to New Levels

It's only a resource if you know it's there.

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Creating A Greener Energy Future For the Commonwealth

EPA Webinar: Efficiency As a Resource
January 19,2010

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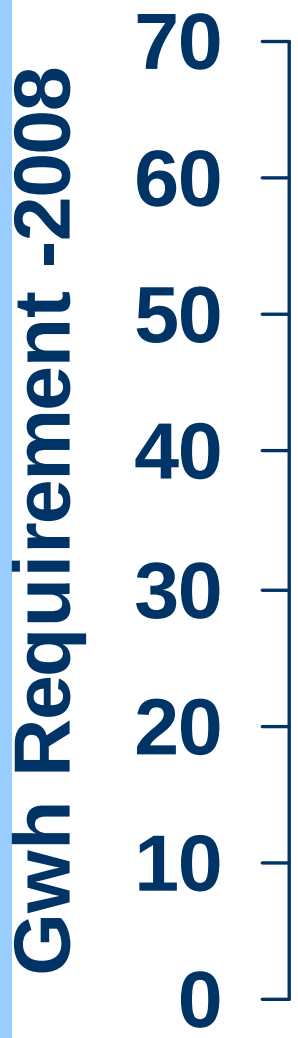
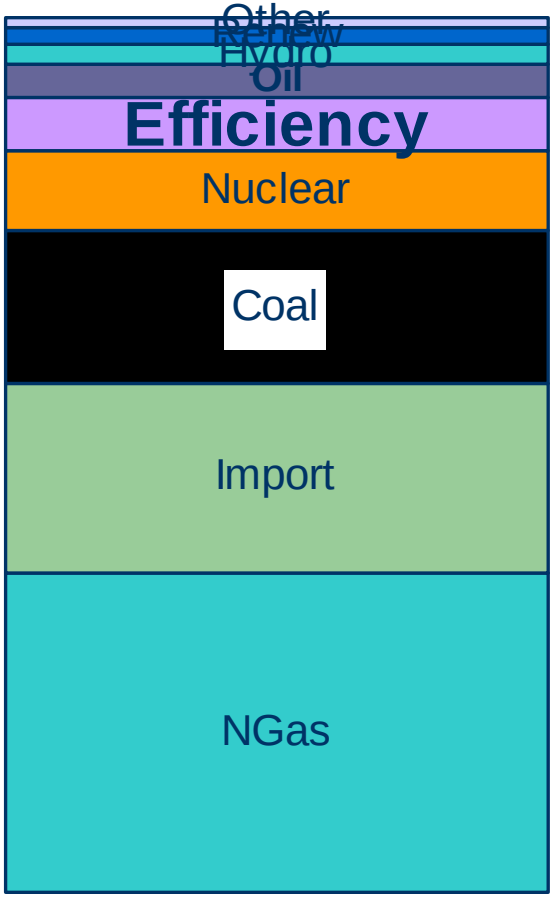
Efficiency is a significant resource





Cumulative efficiency provided 8% electric supply

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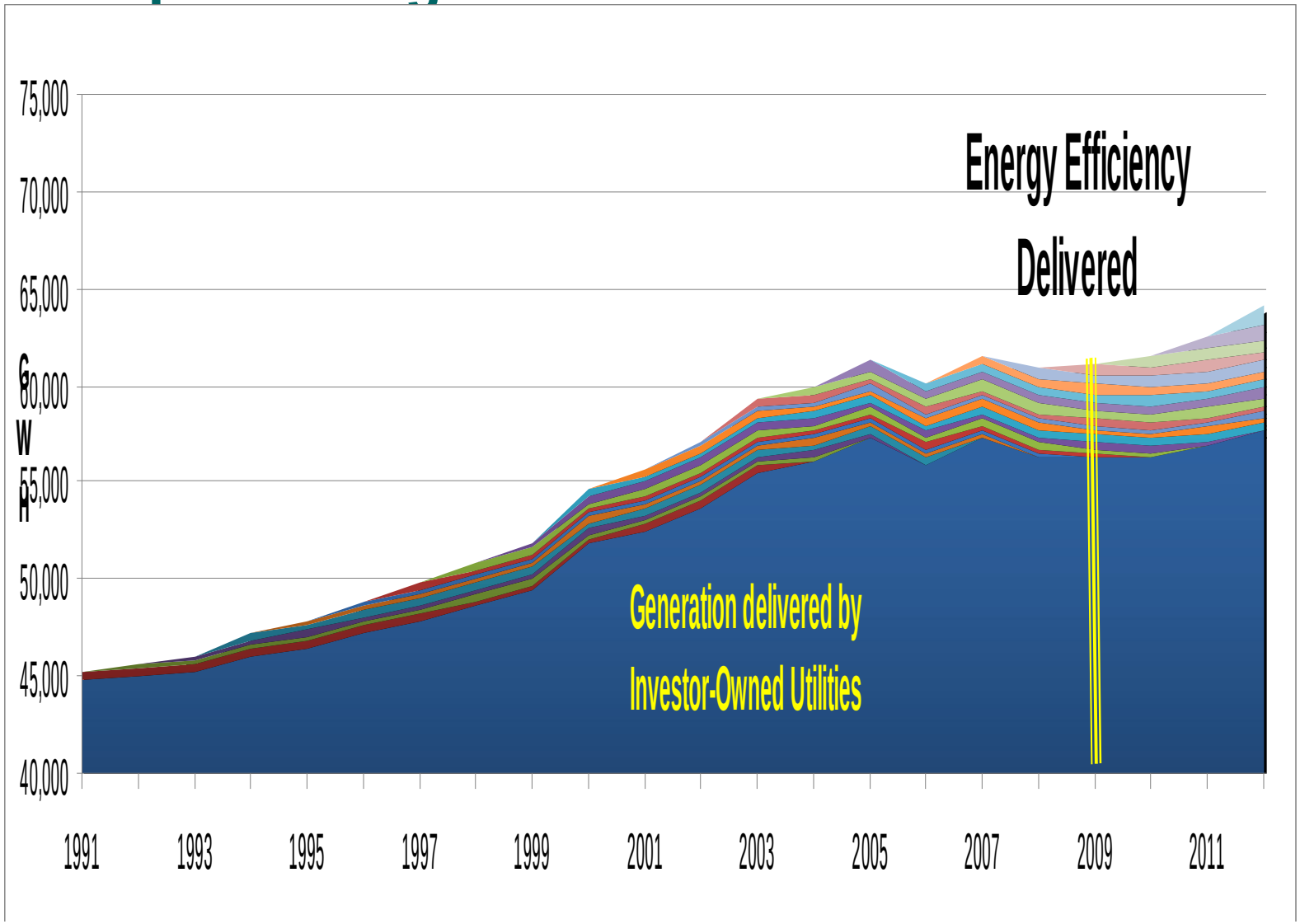
Over time efficiency has provided a growing percentage of our electric need



Energy Efficiency Resource Standards

State	Date Established	Goal	Target End Date	Implied Annual % savings* (% of total forecast load)
Texas	2007	20% of load growth	2010	0.5%
Vermont	2008	2.0% per year (contract goals)	2011	2.0%
California	2004	EE is first resource to meet future electric needs[1]	2013	2.0% +
Hawaii	2004	.4% - .6% per year[2]	2020	0.5%
Pennsylvania	2008	3.0% of 2009-2010 load	2013	0.6%
Connecticut	2007	All Achievable Cost Effective[3]	2018	2.0% +
Nevada	2005	0.6% of 2006 annually[4]	n/a	0.6%
Washington	2006	All Achievable Cost Effective	2025	2.0% +
Colorado	2007	1.0% per year	2020	1.0%
Minnesota (elec & gas)	2007	1.5% per year	2010	1.5%
Virginia	2007	10% of 2006 load	2022	2.2%
Illinois	2007	2.0% per year	2015	2.0%
North Carolina	2007	5% of load[5]	2018	0.4%
New York (electric)	2008	10.5% of 2015 load[6]	2015	1.5%
New York (gas)	2009	15% of 2020 load[6]	2020	1.5%
New Mexico	2009	All achievable cost-effective, minimum 10% of 2005 load	2020	1.0% +
Maryland	2008	15% of 2007 per capita load[7]	2015	3.3%
Ohio	2008	2.0% per year	2019	2.0%
Michigan (electric)	2008	1.0% per year	2012	1.0%
Michigan (gas)	2008	0.75% per year	2012	0.8%
Iowa (electric)	2009	1.5% per year	2010	1.5%
Iowa (gas)	2009	0.85% per year	2013	0.3%
Massachusetts	2008	All Achievable Cost Effective		2.0% +
New Jersey (electric & g	2008	20% of 2020 load[8]	2020	≤2.0%
Rhode Island	2008	All Achievable Cost Effective		2.0% +

Source: Schlegel and Associates

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Massachusetts Standards

- The Green Communities Act requires electric and gas utilities to "***first acquire all available cost-effective energy efficiency that is less than the cost of supply.***"

- The Global Warming Solutions Act requires reductions of **10 to 25% by 2020** and **80% by 2050**.

More Resources Under GCA

- 2001-2008 Systems Benefits Charge at 2.5 mils/ kWh sold
  - $125 Million/yr for electric efficiency
  - average of 450 Annual GWh, 60 MW
  - Achieve approximately 0,8% of load annually
  - $25 Million for gas efficiency

- **GCA keeps the SBC and adds:**
  - Forward Capacity Market ~ $10 Million/yr
  - RGGI – Estimated $50M for 2009
  - Distribution Charges if needed (EERF)
  - **2009 Total $180 Million electric + $30 Million gas**
  - **2010-2012 $2.1 Billion (elec. and gas combined)**

  - Companion 2008 Decoupling Order will remove disincentives to further expansion of utility programs- first rate cases settled in 2009

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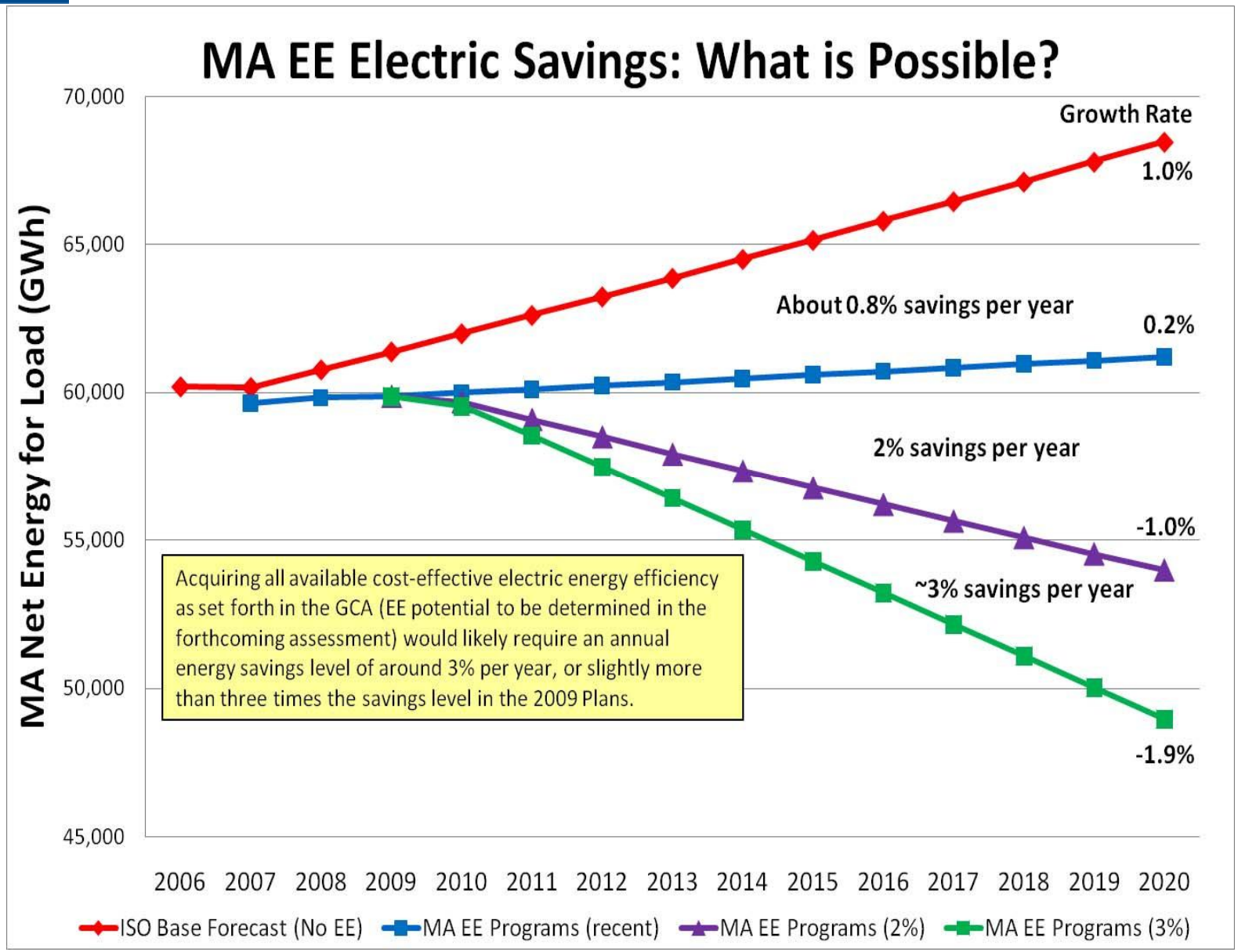

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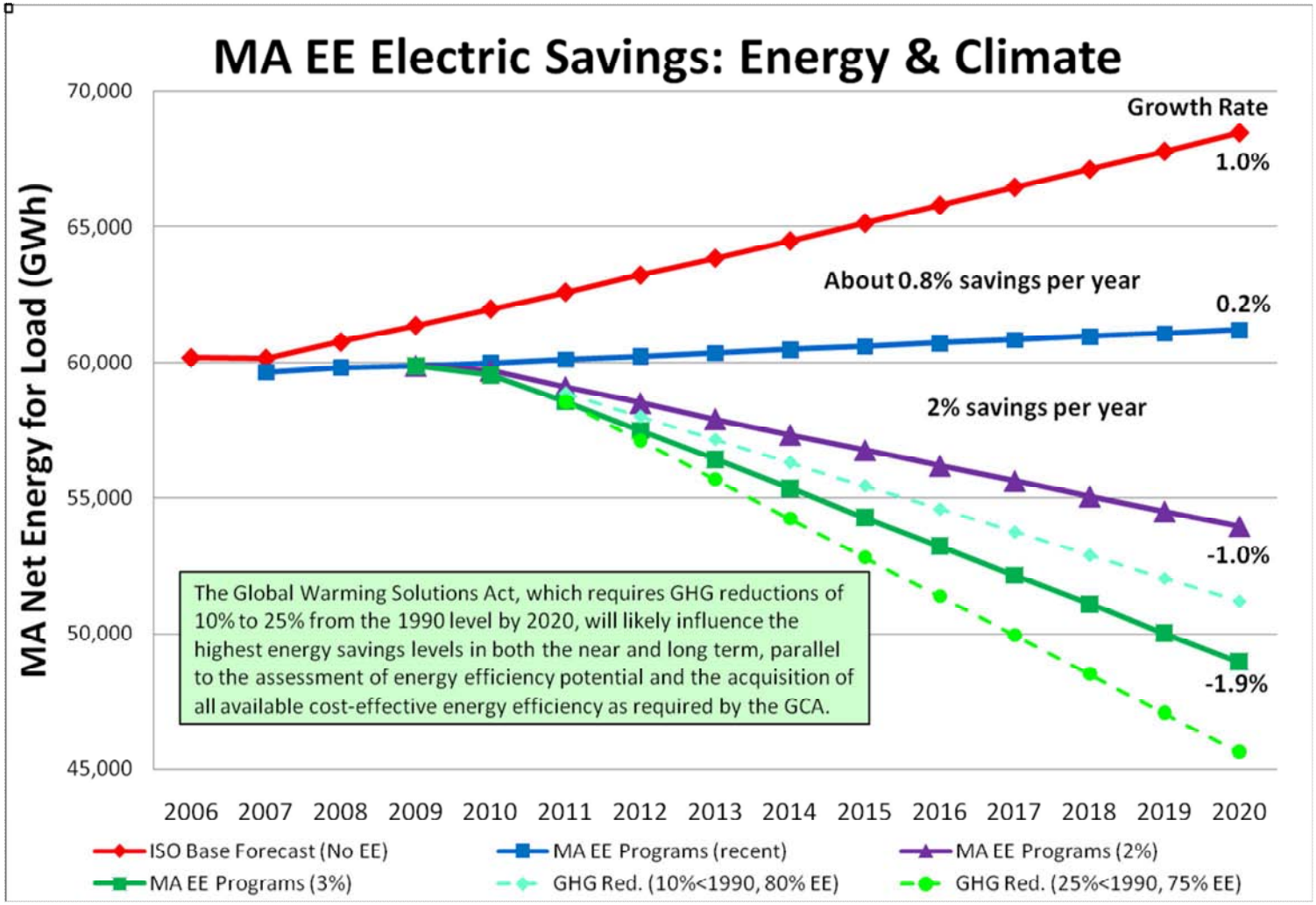
EE To Meet the GHG Reduction Targets



What does all cost-effective mean?

- Not defined in law, no Integrated Resource Plan required by regulators but a regulatory finding required.
- Specific to each 3 year plan.
- In MA focused on
  - Natural Gas
  - Electric energy
  - CHP
  - Non-regulated fuels not specifically included but residential customers with oil, propane, fuels are served.

Assessment Process

Insufficient time for a typical tech potential study and reasons not to completely depend on this approach:

- Potential studies are inherently conservative, tend to miss technology changes and diffusion rates
- Focus on end-use and specific technologies (widgets), misses additional savings in whole-facility and behavioral approaches.
- “Achievable” estimates don’t account well for rampup.
- Studies frequently out-performed by reality: e.g. VT projected 2.5% load in 2008 and captured 4.5%

Assessment Process (2)

- Energy Efficiency Advisory Consultant team developed a meta-assessment for 2010-12, through a review of recent potential studies in New York, other New England states, essentially setting lower bounds.
- Assessment Findings 2010-2012:
  - At least 2.5% per year from EE programs and 0.5% per year from CHP
  - Natural gas: reasonable long-term value for all available cost-effective EE program savings is at least 2% per year.

From Assessment to Goals

Determination of goals influenced by additional factors including:

- Program Administrator estimates of ramp up capabilities and initiating new programs.
- Program cost/net benefits.
- Performance incentives.
- Rate and bill impacts on customers.

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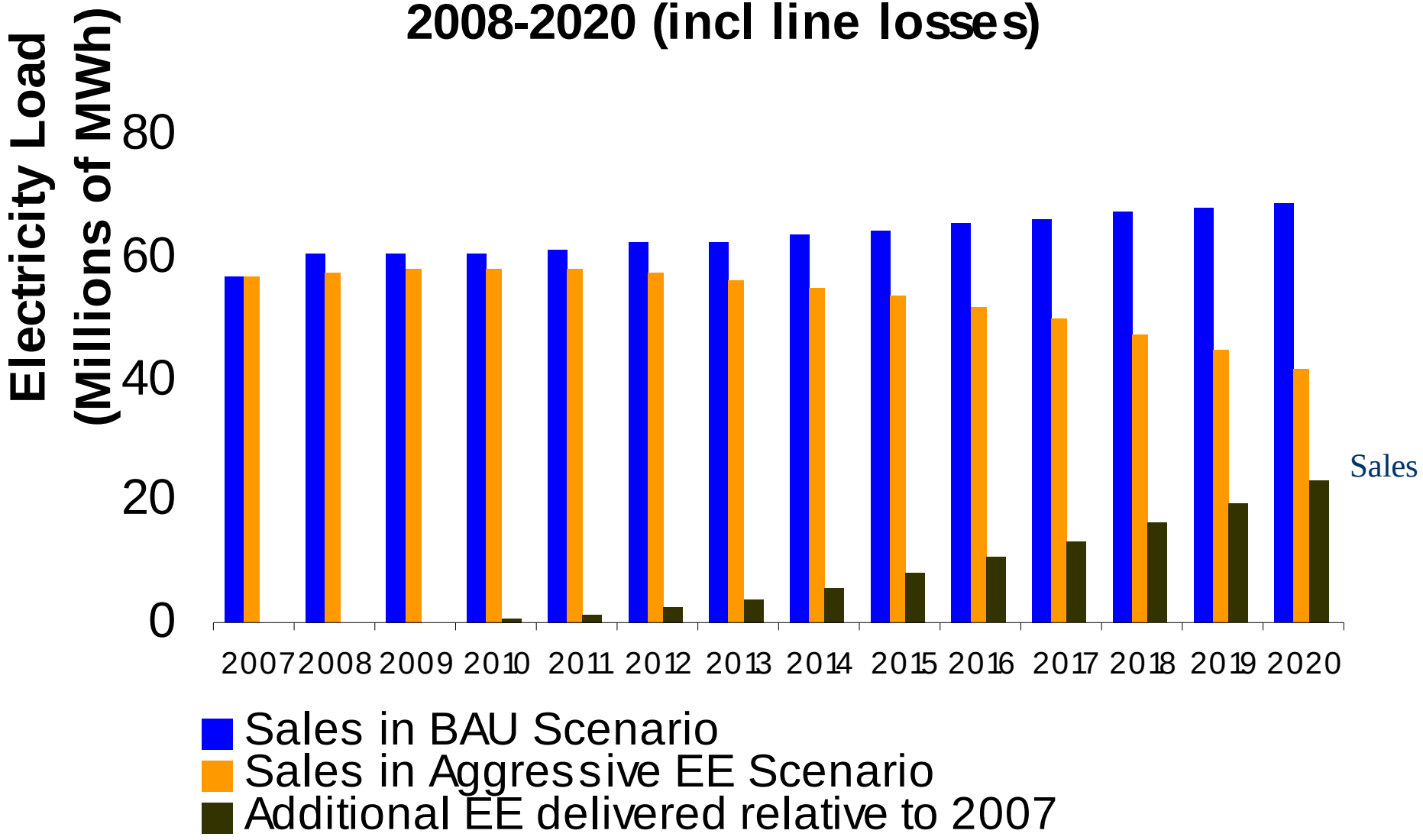
Massachusetts Electric Load in Potential Energy Efficiency Scenario 2008-2020 (incl line losses)



Sales

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